REMARKS

In the Office Action mailed November 2, 2006, claims 1-21 were rejected under 35 U.S.C. § 102 over U.S. Patent No. 6,154,659 (Jalali).

Claims 1 and 10 have been amended to introduce subject matter of respective dependent claims 2 and 12.

Claim 1 now discloses a method of transmitting a radio signal with polarization diversity, comprising the steps of: transmitting a plurality of versions of the radio signal having different polarizations from a first station to a second station; and adaptively controlling respective transmission powers of said versions of the radio signal according to measurements carried out by the first station on signals transmitted by the second station, wherein an optimal transmission power distribution of the radio signal between the polarizations is estimated on the basis of minimizing a cost function relative to a quality of the signal received by the second station, and the transmission power is distributed between said versions of the radio signal in accordance with the estimated distribution.

Jalali relates to a power control method in a code division multiple access (CDMA) system. Generally, in a single carrier environment, the radiotelephone demodulates data frames received from the base station to calculate the symbol-energy-to-noise-density of the frames. The calculated symbol-energy-to-noise-density is compared against a target symbol-energy-to-noise-density value to determine whether base station power should be increased or decreased or left unchanged.

If the estimated symbol-energy-to-noise-density is less than the target value, a power control command is transmitted over a reverse power control signaling channel to the base station instructing the base station to increase its transmit power a predetermined amount. If the estimated symbol-energy-to-noise-density is greater than the target value, the power control command instructs the base station to decrease transmit power (column 3, paragraphs 2 and 3).

Jalali further states that in some embodiments, the plurality of carriers are transmitted through one antenna. In other embodiments, the plurality of carriers is transmitted through a plurality of antennas which are separated in space and/or have orthogonal polarization. This reduces correlation of fading on different carrier frequencies (column 3, lines 47-52).

Jalali fails to disclose that an optimal transmission power distribution of the radio signal between the polarizations is estimated. Furthermore, Jalali does not disclose that the transmission power is distributed between the versions of the radio signal in accordance with the estimated distribution.

In the solution of Jalali, a mobile terminal sends power correction commands to a base station which adjusts the transmission power based on these commands. However, the power adjustment is independent of the polarizations of the antennas. This means that irrespective of the polarizations, the power is adjusted in a specified manner. Moreover, the mobile terminal does not make any distinction between different polarizations, and thus it is clear that it does not estimate any optimal transmission power distribution of the radio signals between the polarizations.

The method according to some embodiments of the present invention is based on the observation that, in general, independently of the fast fading phenomenon, one polarization is favored over the other at a given instant in terms of power of the useful signal measured at the receiver. It is therefore judicious to favor one of the two polarizations in transmission in some embodiments (*see, e.g.*, Specification, page 5, lines 1-7). On the other hand, the solution provided by Jalali does not allow favoring certain polarization over the other(s).

Based on the foregoing, claim 1 is not anticipated by Jalali.

Independent claim 10 is similarly allowable. Dependent claims are allowable for at least the same reasons as corresponding independent claims.

Allowance of all claims is respectfully requested. The Commissioner is authorized to charge any additional fees and/or credit any overpayment to Deposit Account No. 20-1504 (MTR.0090US).

Respectfully submitted,

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